

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application.

Claims 1-28 (Canceled)

29. (Currently amended) A device for the optical display of n switching states of a sensor, the device comprising:

a sensor comprising a plurality of switching states;

a plurality of different coloured lighting devices for the optical transmission of information regarding the sensor, each lighting device having at least one lighting element; and

a sensor casing that includes including a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk in the case of simultaneously active lighting elements; and

wherein at least one optical interface subdividing interfaces subdivide the transparent casing part into segments in which the lighting elements are received, wherein each segment is associated with at least one of the lighting elements; and

wherein each of the plurality of switching states of the sensor corresponds to a unique combination of zero or more of the plurality of lighting devices having an active at least one lighting element; and

wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range.

30. (Previously presented) The device of claim 29, wherein at least one lighting device includes a plurality of lighting elements selected from the group consisting of light bulbs and LEDs.

31. (Previously presented) The device of claim 30, wherein at least one lighting device includes a plurality of lighting elements that are placed on opposing sides of the transparent casing part.

32. (Previously presented) The device of claim 29, wherein the lighting devices are placed on a printed circuit board and are arranged in at least one of a row or in parallel to one another in order to illuminate a segment.

33. (Previously presented) The device of claim 32, wherein the printed circuit board is slid into the transparent casing part.

34. (Previously presented) The device of claim 29, wherein the transparent casing part is constructed for one of a terminal or a central installation on a casing selected from the group of casings consisting of cylindrical, round and polygonal casings.

35. (Previously presented) The device of claim 29, wherein the lighting devices are visible to the user from any azimuth direction in a polar angle range between approximately 20° and approximately 180°.

36. (Currently amended) The device of claim 29, wherein the at least one optical interface
~~is interfaces~~ are formed by at least one interface selected from the group consisting of
printed circuit boards, planar shaped separations, insert parts and cables.

37. (Previously presented) The device of claim 29, wherein an outer face of the
transparent casing part is at least partly roughened to increase light scattering.

38. (Currently amended) The device of claim 29, wherein the transparent casing part is at
least partly coloured to avoid viewing inside the sensor device.

39. (Currently amended) The device of claim 29, wherein the ~~transparent casing part is~~
~~constructed as part of device~~ is a joystick.

40. (Previously presented) The device of claim 29, wherein light scattering pigments are
input in a surface-distributed manner, at least zonally, into a material of the transparent
casing part to increase light scattering.

41. (Previously presented) The device of claim 29, wherein an interior of the transparent
casing part is at least partly silvered to improve leading out of the light.

42. (Previously presented) The device of claim 29, wherein the light emission angle for a
segment is limited by cavities introduced in a clearly defined manner into the transparent
casing part.

43. (Previously presented) The device of claim 29, wherein the transparent casing part includes a plurality of cable bushings with an insertion bevel as a cable insertion which is constructed as part of an optical interface.

44. (Previously presented) The device of claim 29, wherein the transparent casing part is constructed as one of a tubular plug insert or a compact end termination.

45. (Previously presented) The device of claim 29, wherein the sensor casing is forked.

46. (Previously presented) The device of claim 45, wherein the transparent casing part is included on at least one fork end of the sensor casing.

47. (Previously presented) The device of claim 29, wherein the transparent casing part forms the sensor casing.

48. (Currently amended) The device of claim 29, wherein the at least one additional optical interface is formed into the sensor device by casting resin.

49. (Previously presented) The device of claim 29, wherein the segments are filled with at least one of a sealing or a casting compound.

50. (Previously presented) The device of claim 29, wherein at least one of the segments includes a plurality of differently coloured lighting devices.

51. (Previously presented) The device of claim 29, wherein at least one of the segments is constructed as an optical interface for an external computer means.

52. (Previously presented) The device of claim 29, wherein the transparent casing part includes at least one optical bridge that, to a limited extent, overcouples the light for the clearly defined light transmission from one segment into another segment.

53. (Previously presented) The device of claim 29, wherein the sensor is constructed as a sensor selected from the group consisting of inductive, optical, capacitive, ultrasonic, microwave, temperature, fill level, infrared, ultraviolet, pressure, flow sensors, position sensors, proximity switches and electrical switching devices.

54. (Currently amended) A device ~~for the optical display of n switching states of a sensor,~~
~~the device comprising:~~

a sensor comprising a plurality of switching states;

a plurality of different coloured lighting devices for the optical transmission of information regarding the sensor, each lighting device having at least one lighting element; and

a sensor casing including a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk, particularly in the case of simultaneously active lighting elements; and

wherein at least one optical interface subdividing interfaces subdivide the transparent casing part into segments in which the lighting elements are received, wherein each segment is associated with at least one of the lighting elements;

wherein each of the plurality of switching states of the sensor corresponds to a unique combination of zero or more of the plurality of lighting devices having an active at least one lighting element;

wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range; and

wherein the ~~transparent casing part~~ device is constructed for use in motor vehicles as part of at least one of a hand brake lever, a gear shift lever, a windscreen wiper lever, a direction indicator lever, a control button of an air conditioning system, a mirror adjustment button, a window regulator button or a sliding roof button.

55. (Currently amended) A device ~~for optically transmitting information, the device comprising:~~

a sensor comprising a plurality of switching states;

a plurality of different coloured lighting devices, each lighting device having at least one lighting element; and

a sensor casing ~~that includes~~ including a transparent casing part for receiving the lighting elements and for avoiding optical crosstalk when two or more lighting elements are simultaneously active; and

wherein the transparent casing part includes at least one optical interface subdividing interfaces that subdivide the transparent casing part into segments in which the

lighting elements are received, wherein each segment is associated with the at least one lighting element of only one of the lighting devices; and

wherein each of the plurality of switching states of the sensor corresponds to a unique combination of zero or more of the plurality of lighting devices having an active at least one lighting element; and

wherein the transparent casing part is constructed and positioned so that the lighting devices are visible by a user from each azimuth angle within a polar angle range.

56. (New) The device of claim 53, wherein the sensor is a standard sensor in automation technology.

57. (New) The device of claim 53, wherein the sensor casing comprises a cylindrical shape, and wherein the sensor casing includes a transparent casing part at each end of the cylindrical shape.